

What is claimed is:

- 1     1.     An acid beverage composition, comprising;  
2           (A)     a hydrated protein stabilizing agent;  
3           (B)     at least one flavoring material comprising a fruit juice, a vegetable  
4 juice, citric acid, malic acid, tartaric acid, lactic acid, ascorbic acid, glucono delta  
5 lactone or phosphoric acid; and  
6           (C)     a slurry of an aqueous protein material wherein the slurry of the  
7 aqueous protein material is prepared by a process, comprising;  
8                 (1)     preparing an aqueous extract from a protein containing  
9                         material,  
10                (2)     adjusting the pH of the aqueous extract to a value of from  
11                         about 4 to about 5 to precipitate the protein material,  
12                (3)     separating the precipitated protein material and forming a  
13                         suspension of the precipitated protein material in water,  
14                (4)     adjusting the pH of the suspension to a value of from about 4.0  
15                         to about 6.0 to form a slurry of an aqueous protein material,  
16                         and optionally  
17                (5)     pasteurizing the slurry of the aqueous protein material;  
18 wherein the acid beverage composition has a pH of from 3.0 to 4.5.
- 1     2.     The composition of claim 1 wherein the protein stabilizing agent (A)  
2 comprises a hydrocolloid.
- 1     3.     The composition of claim 1 wherein the hydrocolloid comprises alginate,  
2 microcrystalline cellulose, jellan gum, tara gum, carrageenan, guar gum, locust bean  
3 gum, xanthan gum, cellulose gum and pectin.
- 1     4.     The composition of claim 1 wherein the protein stabilizing agent (A) is a high  
2 methoxyl pectin.

1 5. The composition of claim 1 wherein the protein stabilizing agent (A) is  
2 present at from 0.5-5% by weight of the total composition.

1 6. The composition of claim 1 wherein the pH of the protein stabilizing agent  
2 (A) is from 2.0-5.5.

1 7. The composition of claim 1 wherein within (C) the slurry has a solids content  
2 of from 5-20% by weight.

1 8. The composition of claim 1 wherein within (C) the slurry has a solids content  
2 of from 8-18% by weight.

1 9. The composition of claim 1 wherein within (C) the slurry has a solids content  
2 of from 10-15% by weight.

1 10. The composition of claim 1 wherein the protein material (C) comprises a  
2 soybean protein material, casein, whey protein, wheat gluten or zein.

1 11. The composition of claim 10 wherein the soybean protein material comprises  
2 a soy flour, soy concentrate or soy protein isolate.

1 12. The composition of claim 11 wherein the soybean protein material comprises  
2 a soy protein isolate.

1 13. The composition of claim 1 wherein the protein material (C) comprises a  
2 hydrolyzed protein material or a non-hydrolyzed protein material.

1 14. The composition of claim 13 wherein the protein material (C) comprises a  
2 hydrolyzed protein material.

1 15. The composition of claim 1 wherein the pH of the acid beverage composition  
2 is from 3.2-4.0.

1 16. The composition of claim 1 wherein the pH of the acid beverage composition  
2 is from 3.6-3.8.

1 17. A process for preparing an acid beverage composition, comprising;  
2 forming a preblend (I) by mixing  
3 (A) a hydrated protein stabilizing agent and  
4 (B) at least one flavoring material comprising a fruit juice, a vegetable  
5 juice, citric acid, malic acid, tartaric acid, lactic acid, ascorbic acid, glucono delta  
6 lactone or phosphoric acid; and mixing preblend (I) and  
7 (C) a slurry of an aqueous protein material wherein the slurry of the  
8 aqueous protein material is prepared by a process, comprising;  
9 (1) preparing an aqueous extract from a protein containing  
10 material,  
11 (2) adjusting the pH of the aqueous extract to a value of from  
12 about 4 to about 5 to precipitate the protein material,  
13 (3) separating the precipitated protein material and forming a  
14 suspension of the precipitated protein material in water,  
15 (4) adjusting the pH of the suspension to a value of from about 4.0  
16 to about 6.0 to form a slurry of an aqueous protein material, and  
17 (5) pasteurizing the slurry of the aqueous protein material;  
18 to form a blend and  
19 pasteurizing and homogenizing the blend;  
20 wherein the acid beverage composition has a pH of from 3.0 to 4.5.

1 18. The process of claim 17 wherein the protein stabilizing agent (A) comprises a  
2 hydrocolloid.

1 19. The process of claim 17 wherein the hydrocolloid comprises alginate,  
2 microcrystalline cellulose, jellan gum, tara gum, carrageenan, guar gum, locust bean  
3 gum, xanthan gum, cellulose gum and pectin.

1 20. The process of claim 17 wherein the protein stabilizing agent (A) is a high  
2 methoxyl pectin.

1 21. The process of claim 17, wherein within preblend (I), the weight ratio of  
2 (A):(B) is from 65-73:27-32.

1 22. The process of claim 17 wherein the pH of the protein stabilizing agent (A) is  
2 from 2.0-5.5.

1 23. The process of claim 17, wherein the weight ratio of preblend (I):(C) is from  
2 55-75:25-45.

1 24. The process of claim 17 wherein within (C) the slurry has a solids content of  
2 from 5-20% by weight.

1 25. The process of claim 17 wherein within (C) the slurry has a solids content of  
2 from 8-18% by weight.

1 26. The process of claim 17 wherein within (C) the slurry has a solids content of  
2 from 10-15% by weight.

1 27. The process of claim 17 wherein the protein material (C) comprises a soybean  
2 protein material, casein, whey protein, wheat gluten or zein.

1 28. The process of claim 27 wherein the soybean protein material comprises a soy  
2 flour, soy concentrate or soy protein isolate.

1 29. The process of claim 28 wherein the soybean protein material comprises a soy  
2 protein isolate.

1 30. The process of claim 17 wherein within (C)(5), pasteurizing is carried out at a  
2 temperature of at least 180°F for at least 10 seconds.

1 31. The process of claim 17 wherein the protein material (C) comprises a  
2 hydrolyzed protein material or a non-hydrolyzed protein material.

1 32. The process of claim 31 wherein the protein material (C) comprises a  
2 hydrolyzed protein material.

1 33. The process of claim 17 wherein the pH of the acid beverage composition is  
2 from 3.2-4.0.

1 34. The process of claim 17 wherein the pH of the acid beverage composition is  
2 from 3.6-3.8.

1 35. The process of claim 17 wherein within the blend, pasteurizing is carried out  
2 at a temperature of at least 180°F for at least 10 seconds.

1 36. The process of claim 17 wherein within the blend, homogenizing is carried  
2 out in two stages comprising a high pressure stage and a low pressure stage.

1 37. The process of claim 36 wherein the high pressure stage is from 1500-5000  
2 pounds per square inch.

1 38. The process of claim 36 wherein the low pressure stage is from 300-1000  
2 pounds per square inch.

1 39. A process for preparing an acid beverage composition, comprising;

2 forming a preblend (I) by mixing  
3 (A) a hydrated protein stabilizing agent and  
4 (B) at least one flavoring material comprising a fruit juice, a vegetable  
5 juice, citric acid, malic acid, tartaric acid, lactic acid, ascorbic acid, glucono delta  
6 lactone or phosphoric acid; and  
7 forming a preblend (II) by mixing  
8 (A) a hydrated protein stabilizing agent; and  
9 (C) a slurry of an aqueous protein material wherein the slurry of the  
10 aqueous protein material is prepared by a process, comprising;  
11 (1) preparing an aqueous extract from a protein containing  
12 material,  
13 (2) adjusting the pH of the aqueous extract to a value of from  
14 about 4 to about 5 to precipitate the protein material,  
15 (3) separating the precipitated protein material and forming a  
16 suspension of the precipitated protein material in water,  
17 (4) adjusting the pH of the suspension to a value of from about 4.0  
18 to about 6.0 to form a slurry of an aqueous protein material, and  
19 (5) pasteurizing the slurry of the aqueous protein material; and  
20 mixing preblend (I) and preblend (II) to form a blend; and  
21 pasteurizing and homogenizing the blend;  
22 wherein the acid beverage composition has a pH of from 3.0 to 4.5.

1 40. The process of claim 39 wherein the protein stabilizing agent (A) comprises a  
2 hydrocolloid.

1 41. The process of claim 39 wherein the hydrocolloid comprises alginate,  
2 microcrystalline cellulose, jellan gum, tara gum, carrageenan, guar gum, locust bean  
3 gum, xanthan gum, cellulose gum and pectin.

1 42. The process of claim 39 wherein the protein stabilizing agent (A) is a high  
2 methoxyl pectin.

1 43. The process of claim 39, wherein within preblend (I), the weight ratio of  
2 (A):(B) is from 65-73:27-32.

1 44. The process of claim 39 wherein the pH of the protein stabilizing agent (A) is  
2 from 2.0-5.5.

1 45. The process of claim 39, wherein within preblend (II), the weight ratio of  
2 (A):(C) is from 25-35:65-75.

1 46. The process of claim 39 wherein within (C) the slurry has a solids content of  
2 from 5-20% by weight.

1 47. The process of claim 39 wherein within (C) the slurry has a solids content of  
2 from 8-18% by weight.

1 48. The process of claim 39 wherein within (C) the slurry has a solids content of  
2 from 10-15% by weight.

1 49. The process of claim 39 wherein the protein material (C) comprises a soybean  
2 protein material, casein, whey protein, wheat gluten or zein.

1 50. The process of claim 49 wherein the soybean protein material comprises a soy  
2 flour, soy concentrate or soy protein isolate.

1 51. The process of claim 50 wherein the soybean protein material comprises a soy  
2 protein isolate.

1 52. The process of claim 39 wherein within (C)(5), pasteurizing is carried out at a  
2 temperature of at least 180°F for at least 10 seconds.

- 1 53. The process of claim 39 wherein the protein material (C) comprises a  
2 hydrolyzed protein material or a non-hydrolyzed protein material.
- 1 54. The process of claim 53 wherein the protein material (C) comprises a  
2 hydrolyzed protein material.
- 1 55. The process of claim 39 wherein the weight ratio of preblend (I):preblend (II)  
2 is from 25-55:45-75.
- 1 56. The process of claim 39 wherein the pH of the acid beverage composition is  
2 from 3.2-4.0.
- 1 57. The process of claim 39 wherein the pH of the acid beverage composition is  
2 from 3.6-3.8.
- 1 58. The process of claim 39 wherein within the blend, pasteurizing is carried out  
2 at a temperature of at least 180°F for at least 10 seconds.
- 1 59. The process of claim 39 wherein within the blend, homogenizing is carried  
2 out in two stages comprising a high pressure stage and a low pressure stage.
- 1 60. The process of claim 59 wherein the high pressure stage is from 1500-5000  
2 pounds per square inch.
- 1 61. The process of claim 59 wherein the low pressure stage is from 300-1000  
2 pounds per square inch.
- 1 62. A process for preparing an acid beverage composition, comprising;  
2 forming a preblend (III) by mixing  
3 (A) a hydrated protein stabilizing agent and



4 (C<sup>1</sup>) a slurry of an aqueous protein material wherein the slurry of the  
5 aqueous protein material is prepared by a process, comprising;  
6 (1) preparing an aqueous extract from a protein containing  
7 material,  
8 (2) adjusting the pH of the aqueous extract to a value of from  
9 about 4 to about 5 to precipitate the protein material,  
10 (3) separating the precipitated protein material and forming a  
11 suspension of the precipitated protein material in water,  
12 (4) adjusting the pH of the suspension to a value of from about 4.0  
13 to about 6.0 to form a slurry of an aqueous protein material; and  
14 mixing preblend (III) with  
15 (B) at least one flavoring material comprising a fruit juice, a vegetable  
16 juice, citric acid, malic acid, tartaric acid, lactic acid, ascorbic acid, glucono delta  
17 lactone or phosphoric acid;  
18 to form a blend; and  
19 pasteurizing and homogenizing the blend;  
20 wherein the acid beverage composition has a pH of from 3.0 to 4.5.

1 63. The process of claim 62 wherein the protein stabilizing agent (A) comprises a  
2 hydrocolloid.

1 64. The process of claim 62 wherein the hydrocolloid comprises alginate,  
2 microcrystalline cellulose, jelllan gum, tara gum, carrageenan, guar gum, locust bean  
3 gum, xanthan gum, cellulose gum and pectin.

1 65. The process of claim 62 wherein the protein stabilizing agent (A) is a high  
2 methoxyl pectin.

1 66. The process of claim 62, wherein within preblend (III), the weight ratio of  
2 (A):(C<sup>1</sup>) is from 45-70:30-55.

- 1 67. The process of claim 62 wherein the pH of the protein stabilizing agent (A) is  
2 from 2.0-5.5.
- 1 68. The process of claim 62, wherein the weight ratio of preblend (III):(B) is from  
2 70-95:5-30.
- 1 69. The process of claim 62 wherein within (C) the slurry has a solids content of  
2 from 5-20% by weight.
- 1 70. The process of claim 62 wherein within (C) the slurry has a solids content of  
2 from 8-18% by weight.
- 1 71. The process of claim 62 wherein within (C) the slurry has a solids content of  
2 from 10-15% by weight.
- 1 72. The process of claim 62 wherein the protein material (C) comprises a soybean  
2 protein material, casein, whey protein, wheat gluten or zein.
- 1 73. The process of claim 72 wherein the soybean protein material comprises a soy  
2 flour, soy concentrate or soy protein isolate.
- 1 74. The process of claim 73 wherein the soybean protein material comprises a soy  
2 protein isolate.
- 1 75. The process of claim 62 wherein within (C)(5), pasteurizing is carried out at a  
2 temperature of at least 180°F for at least 10 seconds.
- 1 76. The process of claim 62 wherein the protein material (C) comprises a  
2 hydrolyzed protein material or a non-hydrolyzed protein material.

1 77. The process of claim 76 wherein the protein material (C) comprises a  
2 hydrolyzed protein material.

1 78. The process of claim 62 wherein the pH of the acid beverage composition is  
2 from 3.2-4.0.

1 79. The process of claim 62 wherein the pH of the acid beverage composition is  
2 from 3.6-3.8.

1 80. The process of claim 62 wherein within the blend, pasteurizing is carried out  
2 at a temperature of at least 180°F for at least 10 seconds.

1 81. The process of claim 62 wherein within the blend, homogenizing is carried  
2 out in two stages comprising a high pressure stage and a low pressure stage.

1 82. The process of claim 81 wherein the high pressure stage is from 1500-5000  
2 pounds per square inch.

1 83. The process of claim 81 wherein the low pressure stage is from 300-1000  
2 pounds per square inch.